

REMARKS

Claims 1-35, as amended, and new claims 36-37 are pending in this application. In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

Independent claims 1 and 18 have been rewritten to clarify the invention. In particular, these claims clarify that the light source is capable of directing light at the object(s). In other words, the light source is separate and distinct from the object. In addition, claims 1 and 18 have been amended to correct terminology in the claim to maintain consistency with the Specification. For example, the claims now recite a light source having an excitation wavelength and a marker(s) having an emission wavelength, which is consistent with the terminology in the Specification. *See, e.g.,* Page 9, lines 8-16.

New independent claim 36 has been added to recite the identical features as originally filed claims 1 and 5, with the exception that the terminology has been updated to maintain consistency with the Specification. Finally, new independent claim 37 has been added to recite features similar to originally filed independent claim 1, *i.e.*, that the primary excitation wavelength of the light source is distinct from the primary emission wavelength of the marker.

As no new matter has been added, Applicants respectfully request entry of these amendments at this time.

THE REJECTION UNDER 35 U.S.C. § 103

Claims 1-35 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,575,719 to Gobush *et al.* in view of U.S. Patent No. 6,324,296 to McSheery *et al.* for the reasons stated on pages 3-5 of the Office Action. Neither Gobush nor McSheery alone, or in combination, disclose or suggest the present invention for at least the reasons that follow.

The Gobush Reference

Gobush generally discloses a method and apparatus for measuring the speed, direction, and orientation of a striking instrument before the point of impact. *See, e.g.,* Col. 1, lines 30-35. The apparatus includes reflective markers on the striking instrument (*see, e.g.,* Col. 3, lines 3-18), a

camera capable of receiving light from the reflective markers (*see, e.g.*, Col. 3, lines 18-22), and flash lamps to illuminate the reflective markers (*see, e.g.*, Col. 3, lines 33-35). The Examiner has stated that Gobush does not explicitly disclose including a filter into the light receiver, *i.e.*, the camera. In order to fill this gap, the Examiner uses McSheery for its filter disclosure. Applicants respectfully submit, however, that one of ordinary skill in the art would not have been motivated to combine Gobush with McSheery in order to arrive at the present invention absent the use of impermissible hindsight for the reasons that follow.

The McSheery Reference

McSheery is generally directed to a motion capture system for graphics animation. *See, e.g.*, Col. 1, lines 8-22. The system purports to have all the advantages of typical magnetic and optical systems without the typical disadvantages of such systems. Col. 5, lines 5-8. As described in the disclosure and illustrated by the figures, the system functions using a module of light point devices that provide a sequence of light pulses received by a plurality of cameras. *See, e.g.*, Col. 8, lines 36-40.

Unlike the present invention, however, the “object” in McSheery has self-contained, *i.e.*, battery powered, light emitting diodes (LEDs) placed thereon. *See, e.g.*, Col. 10, lines 11-12. The light pulses emitted from the LEDs are received by the imaging means. *See, e.g.*, Col. 5, lines 16-40. In other words, McSheery’s LEDs are active markers, *see, e.g.*, Col. 3, lines 6-7, which act independent of a light source. In contrast, the markers presently recited are known to those of ordinary skill in the art to be passive diffuse markers, which function only when excited by a *separate and distinct* light source. Because McSheery is completely silent as to a *separate and distinct* light source that is capable of directing light at the object(s), as presently recited in independent claims 1 and 18, the cited reference does not render the present claims obvious. Moreover, one of ordinary skill in the art would not have been motivated to modify McSheery in order to combine its teachings with Gobush to arrive at the present invention absent the use of impermissible hindsight.

And, as to independent method claim 28, the steps of the method feature “directing a first light towards a field-of-view comprising the first object.” As discussed above, because McSheery lacks a separate light source and, instead, mounts the LEDs directly onto the module, this step is not possible with McSheery’s system. One of ordinary skill in the art would not have

been motivated to add a separate light source in addition to the LEDs without using the instant application as a template, which is, of course, a classic case of hindsight.

Thus, Applicants respectfully submit that the combination of Gobush and McSheery does not render obvious the present invention.

Dependent Claims

With regard to dependent claims 4-6, 8, 10, 20, 23-24, and 31-33, McSheery operates in the infrared spectrum. *See e.g.*, Col. 5, lines 16-40 and Col. 10, lines 9-10. As known to those of ordinary skill in the art, the infrared spectrum is part of the invisible spectrum that is contiguous to the red end of the visible spectrum and that comprises electromagnetic radiation of wavelengths from 800 nm to 1 mm. In contrast, the present invention operates in the visible spectrum, *i.e.*, 400 nm to 800 nm. As such, Applicants respectfully submit that the combination of Gobush and McSheery does not disclose or suggest the subject matter in these claims.

Rejections Based on Routine Skill in the Art

With regard to the Examiner's contention that selecting filters and light sources having specific center wavelengths requires only "routine skill in the art," *i.e.*, items b, d, e, h, and j on pages 4-5 of the Office Action, it appears the Examiner is attempting to take advantage of a form of Official Notice (MPEP § 2144.03). Official Notice unsupported by documentary evidence is only warranted, however, "where the facts asserted are to be well-known, or to be common knowledge in the art, are capable of instant and unquestionable demonstration as being well-known." MPEP § 2144.03(a) at 2100-131. Applicants respectfully submit that the subject matter of the claims addressed in items b, d, e, h, and j is not so well known *to be capable of instant and unquestionable demonstration*. In fact, the lack of previous monitoring systems using the filters and light sources within specific wavelengths as presently claimed demonstrates the non-obvious nature of the claims. As such, Applicants respectfully request that the Examiner provide proof in documentary form that the claimed subject matter is obvious in that it requires only "routine skill in the art."

For the reasons above, Applicants respectfully submit that no combination of the cited references discloses or suggests the present invention. Thus, Applicants respectfully request reconsideration and withdrawal of the § 103 rejection based thereon.

THE PROVISIONAL DOUBLE PATENTING REJECTION

The Examiner provisionally rejected claims 1-35 under the judicially created doctrine of obviousness-type double patenting as obvious over claims 1, 5, and 14 of co-pending U.S. Patent Application No. 09/782,278. In light of the provisional nature of this rejection, Applicants agree to submit a Terminal Disclaimer in compliance with 37 CFR 1.321(c) in the event that allowable claims from both patents are deemed to not be patentably distinct from each other.

NEW CLAIMS ADDED WITH THIS RESPONSE

Independent claims 36-37 have been added with this Response. As briefly discussed above, claim 36 has been written to recite the features of originally filed dependent claim 5 with minor revisions in terminology to maintain consistency with the Specification. This claim now recites a light source having a primary excitation wavelength between about 400 nm and about 800 nm. As discussed above, McSheery operates in the infrared spectrum, which has longer wavelengths than the visible spectrum used by the present invention. As such, Applicants respectfully submit that new claim 36 is not rendered obvious by the cited references.

In addition, new independent claim 37 has been added to recite features similar to originally filed independent claim 1. In particular, the claim 37 recites that the primary excitation wavelength of the light source is distinct from the primary emission wavelength of the marker. Because McSheery's light pulses are self-contained, the excitation source and the emission source are one in the same and cannot, by definition, be distinct as presently recited in claim 37. Thus, Applicants respectfully submit that new independent claim 37 is in condition for allowance.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Fee Sheet Transmittal is submitted herewith to pay for the additional claims added with this Response. No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Swidler Berlin Shereff Friedman, LLP Deposit Account No. 195127, Order No. 20002.0162.

Respectfully submitted,
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP

Dated: March 4, 2004

By: Stephanie D. Scruggs
Stephanie D. Scruggs, Registration No. 54,432
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP
3000 K Street, NW, Suite 300
Washington, D.C. 20007
(202) 424-7755 Telephone
(202) 295-8429 Facsimile